

Ante-Mortem Lower-Segment Caesarean Section: A Saviour of Four Lives — A Case Report of Maternal Survival Following Triplet Gestation Complicated by Severe Pre-Eclampsia with Pulmonary Oedema Requiring Ventilatory Support

Rajendra Saraogi¹, Rekha Ambegaokar¹, Prajakta Mehendale¹, Hetal Mistry¹

¹Department of Obstetrics and Gynaecology, Nanavati Max Super Speciality Hospital, Mumbai, Maharashtra

Correspondence:

Rajendra Saraogi

E-mail: drsaraogi@hotmail.com

DOI: <https://doi.org/10.62830/mmj3-01-17>

Abstract:

Ante-mortem caesarean section (AMCS) is a rare but life-saving intervention performed during maternal cardiac arrest or impending arrest to improve both maternal and neonatal outcomes. Triplet gestation significantly heightens maternal haemodynamic and respiratory demands. Coexisting severe pregnancy-induced hypertension (PIH) with pulmonary oedema creates a high-risk scenario for rapid clinical deterioration. We report a case of a 32-year-old primigravida with a triplet pregnancy complicated by severe pulmonary embolism (PE) and acute pulmonary oedema, who progressed to respiratory failure requiring urgent intubation and ventilatory support. Rapid multidisciplinary intervention culminated in an ante-mortem lower-segment caesarean section (LSCS), resulting in maternal survival and favourable postoperative stabilisation. This case highlights the importance of early recognition of clinical decompensation, prompt airway management, and coordinated obstetric-critical care, intensivist and neonatologist response in managing high-risk multiple gestations.

Key words: Triplets, Severe Pre-Eclampsia, Pulmonary Oedema, Ante-Mortem Caesarean Section (AMCS).

Introduction

A 32-year-old patient conceived triplets through intrauterine insemination (IUI) at a private nursing home. She refused a reduction and wanted to continue all three pregnancies. She was attending regular antenatal care (ANC) visits with her gynaecologist. Suddenly, she developed hypertension and became very breathless at 34 weeks of pregnancy, with oxygen saturation (SpO₂) dropping to 85%; hence, she was transferred under our care at Nanavati Max Super Speciality Hospital, Mumbai.

Triplet gestations are associated with significantly increased maternal complications, including hypertensive disorders, cardiopulmonary compromise, and preterm labour.¹ Severe pregnancy-induced hypertension (PIH) can precipitate pulmonary oedema due to increased systemic vascular resistance, endothelial dysfunction, and reduced colloid osmotic pressure.² In acute decompensation, timely airway support and expedited delivery are essential.³

Reports of ante-mortem caesarean section (AMCS) in triplet pregnancies are exceedingly rare.⁴ We present a case illustrating successful maternal resuscitation and

survival following AMCS in the setting of triplet gestation complicated by severe PIH and pulmonary oedema.

Case Report

A 32-year-old primigravida with IUI-conceived triplet gestation presented at 33 weeks and 5 days with severe hypertension (blood pressure [BP] 150/100 mmHg), dyspnoea, and orthopnoea. She demonstrated tachycardia (118 beats per minute [bpm]), tachypnoea (32 breaths per min), oxygen saturation of 84% on room air, and bilateral basal crepitations. Chest radiography confirmed florid pulmonary oedema. Laboratory investigations revealed proteinuria (2+), elevated uric acid, and marginally deranged liver enzymes.

Despite administration of intravenous antihypertensives and high-flow oxygen, the patient rapidly deteriorated and became severely hypoxic. She underwent urgent endotracheal intubation for respiratory failure. Immediately post-intubation, her vital parameters improved; however, pulmonary oedema persisted. Hence, a decision to initiate diuretics was taken after consultation with the intensivist and obstetric consultants.

Given the critical condition and the presence of a viable triplet gestation, the decision for ante-mortem lower-segment caesarean section (LSCS) was taken to improve maternal survival and optimise foetal outcomes. Accordingly, counselling of the patient's husband and relatives was undertaken, and high-risk consent was obtained. Under continued advanced cardiac life support (ACLS) measures, she was shifted to the operation theatre. A Pfannenstiel incision was made, and rapid LSCS was performed. The foetuses were delivered within three minutes of incision. The three preterm neonates were subsequently transferred to the neonatal intensive care unit for further care.

Following uterine evacuation, maternal haemodynamics improved significantly. However, the uterus remained atonic despite administration of routine uterotonics, and B-Lynch sutures were placed to maintain uterine tone. The patient was stabilised with mechanical ventilation, aggressive BP control, diuresis, and supportive critical-care management. Extubation was achieved on postoperative Day 2; however, she developed persistent abdominal distension due to paralytic ileus, which was

managed conservatively over the next 48 hours. She was discharged in stable condition on Day 10 with normalising BP and no neurological deficit.

All three neonates required intubation for 48 hours, and surfactant therapy was administered. Airway support was gradually tapered, and the neonates subsequently tolerated feeds. They were discharged after two weeks with appropriate weight gain. All three neonates are alive and healthy.

Discussion

This case underscores several critical clinical principles:

1. Triplet gestation as an amplified risk state

Multiple gestations impose increased cardiovascular and respiratory demands, predisposing patients to rapid decompensation when complicated by severe PIH.^{1,5}

2. Pathophysiology of pulmonary oedema in PIH

Severe hypertension produces endothelial dysfunction, capillary leakage, and reduced colloid oncotic pressure,² making patients vulnerable to acute pulmonary oedema, particularly in the third trimester.

3. Need for early airway intervention

Rapid deterioration in respiratory function necessitated early intubation. Maternal hypoxia is the primary driver of foetal compromise in these settings.³

4. Life-saving value of AMCS

AMCS was initiated promptly at the onset of maternal circulatory collapse.^{3,4} Uterine decompression improves maternal venous return and cardiac output, enhancing resuscitation success. In this case, maternal haemodynamics improved immediately following delivery.

5. Multidisciplinary coordination

Successful outcomes require synchronised efforts among obstetricians, anaesthesiologists, intensivists, pulmonologists and neonatologists. Rapid decision-making and well-practised protocols contribute strongly to maternal recovery.

Acknowledgements

We sincerely acknowledge the support from Dr. Tejaswini Ranade and her team (Intensivist), Dr. Uday Bapat and his team (Anaesthesia), Dr. Nitin Rathod (Pulmonologist), and Dr. Hiren Doshi (Neonatologist).

Conclusion

Ante-mortem LSCS remains a vital intervention in cases of maternal cardiopulmonary collapse, even in complex scenarios such as triplet gestation with severe PIH and pulmonary oedema. Early recognition of respiratory compromise, timely intubation, and rapid operative delivery were instrumental in achieving a favourable maternal outcome. This case reinforces the need for robust obstetric-critical care preparedness and rapid multidisciplinary response in high-risk pregnancies.

'A stitch in time saves nine.'

Rajendra Saraogi, Rekha Ambegaokar, Prajakta Mehendale, Hetal Mistry. Ante-Mortem Lower-Segment Caesarean Section: A Saviour of Four Lives — A Case Report of Maternal Survival Following Triplet Gestation Complicated by Severe Pre-Eclampsia with Pulmonary Oedema Requiring Ventilatory Support.

MMJ. 2026, March. Vol 3 (1).

DOI: <https://doi.org/10.62830/mmj3-01-17>

References

1. Narang K, Szymanski LM. Multiple Gestations and Hypertensive Disorders of Pregnancy: What Do We Know?. *Curr Hypertens Rep.* 2021;23(1):1.
2. Ngene NC, Moodley J. Fatal pulmonary oedema associated with severe pre-eclampsia: challenges and lessons. *Cardiovasc J Afr.* 2022;33(5):273–6.
3. Jeejeebhoy FM, Morrison LJ. Maternal cardiac arrest: a practical and comprehensive review. *Emerg Med Int.* 2013;2013(1):274814.
4. Katz V, Balderston K, DeFreest M. Perimortem cesarean delivery: were our assumptions correct? *Am J Obstet Gynecol.* 2005;192(6):1916–20.
5. Croke L. Gestational hypertension and preeclampsia: A practice bulletin from ACOG. *Am Fam Physician.* 2019;100(10):649–50.